ANACONDA Minerals Company
New Mexico Operations
P.O. Box 638
Grants, New Mexico 87020
Telephone 505 876 2211

July 25, 1983

ALBUQUERQUE DISTRICT MINING
RECEIVED
JUL 29 1983
MINERALS MANAGEMENT SERVICE
ALBUQUERQUE, NEW MEXICO

Minerals Staff
Rio Puerco Resource Area
Bureau of Land Management
500 Gold Avenue, S.W.
Federal Building, Room 116
Albuquerque, N.M. 87102

Dear Sir:

The Second Quarter of 1983 sampling data for Anaconda's former Jackpile minesite leases is submitted as follows:

1. Radiological Analysis of Ground and Surface Water.

2. Chemical Analysis of Ground and Surface Water.

3. Maps showing Ground and Surface Water Sampling Locations.

4. Results of the Air Monitoring Program.

5. Results of the Ambient Radon Monitoring Study.

6. Map showing location of Air and Radon Monitoring Stations.

Sincerely,

Meade A. Stirland, Manager
Environment, Health & Safety

mls

Enclosures

cc: W. C. Norem
D. L. Roberts
C. E. Sanchez
L. C. Leyba
File

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AIR QUALITY MONITORING PROGRAM

One 168-hour sample is taken each month at each of the four locations specified by Marc Nelson. They are collected about three meters above the ground on GF/A Glass Microfibre filter paper, using an RAC Heavy-duty Sampler.

AMBIENT RADON STUDY

Radon-222 is monitored continuously at each of the air sampling locations specified by Marc Nelson. The samples are monitored by the use of the Model RGM-2 Radon Gas Monitor. Normal data output is printed hourly and a 24-hour average is printed at the end of a 24-hour period.

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JACKPILE - WATER RADIOLOGICAL ANALYSIS

(SECOND QUARTER, 1983)

DESCRIPTIVE LOCATION	Radium-226 pCi/L			Uranium-Natural ppm		
	Apr.	May	Jun.	Apr.	May	Jun.
Rio Paguate Upstream	<0.20	<0.20	<0.20	0.0034	0.001	0.0021
Rio Moquino Upstream	<0.20	<0.20	<0.20	0.0044	0.001	0.0041
Rio Paguate Above the Confluence	0.77	0.27	1.23	0.023	0.010	0.025
Rio Moquino Above the Confluence	0.48	0.53	0.33	0.0095	0.0071	0.021
Rio Paguate Ford Crossing	1.14	0.21	1.41	0.019	0.018	0.064
Paguate Reservoir	1.17	0.31	0.87	0.052	0.021	0.037
Jackpile Well #4	0.51	<0.20	0.46	0.003	0.004	0.001
Jackpile New Shop	2.29	1.48	1.61	0.005	0.005	0.004
Jackpile Old Shop	3.42	*	*	0.32	*	*
Mouth of Oak Canyon Wash	**	**	**	**	**	**

* No sample collected because power was discontinued.
**No sample because the Mouth of Oak Canyon Wash was dry.

ANACONDA MINERALS COMPANY
NEW MEXICO OPERATIONS

FOR THE MONTH OF: April 1983

DESCRIPTION	DATE	pH	TDS ppm	Cond umhos	HCO_3^- ppm	Cl^- ppm	$SO_4^=$ ppm	Na^+ ppm	K^+ ppm	Ca^{++} ppm	Mg^{++} ppm	NO_3^- ppm	F^- ppm	SiO_2 ppm	Mn^{++} ppm
Rio Paguate Upstream	4/11/83	8.03	866	600	342	15.2	280	48.1	6.1	122	49.5	2.6	0.41	33.6	0.012
Rio Moquino Upstream	4/11/83	8.17	1204	1050	268	10.8	604	112	6.8	129	66	6.6	0.42	20.3	0.007
Rio Paguate Above the Confluence	4/11/83	8.02	895	830	314	16.2	329	54	6.6	119	54	2.0	0.40	32.3	0.023
Rio Moquino Above the Confluence	4/11/83	7.96	1317	1150	268	11.2	675	127	7.0	142	81	5.0	0.45	23.1	0.010
Rio Paguate Ford Crossing	4/4/83	6.76	524	890	157	7.0	214	44	3.9	60	32.1	5.1	0.27	23.5	0.012
Paguate Reservoir	4/4/83	7.33	1124	750	345	15	461	121	8.9	109	59	4.4	0.48	18.4	0.020
Jackpile #4	4/4/83	8.38	798	700	381	12.6	165	229	1.0	2.5	0.4	5.2	1.2	10.5	0.013
Jackpile New Shop	4/4/83	8.00	1538	1550	400	29.0	625	461	2.9	12.3	1.6	5.1	1.3	15.0	0.021
Jackpile Old Shop	4/4/83	7.16	3972	3200	254	115	2428	540	10.4	328	223	72	0.65	14.8	0.009

	DATE	As ppm	Ba ppm	Cd ppm	Cr ppm	Pb ppm	Hg ppm	Se ppm	Cu ppm	Fe ppm	Zn ppm	Mo ppm	Ni ppm	V ppm
Rio Paguate Upstream	4/11/83	<0.005	0.06	<0.001	<0.005	<0.01	<0.0005	<0.005	0.016	0.008	0.011	<0.01	<0.005	<0.05
Rio Moquino Upstream	4/11/83	<0.005	<0.05	<0.001	<0.005	<0.01	<0.0005	<0.005	0.011	0.006	0.003	<0.01	<0.005	<0.05
Rio Paguate Above the Confluence	4/11/83	<0.005	0.05	<0.001	<0.005	<0.01	<0.0005	<0.005	0.008	0.005	0.002	<0.01	<0.005	<0.05
Rio Moquino Above the Confluence	4/11/83	<0.005	<0.05	<0.001	<0.005	<0.01	<0.0005	<0.005	0.008	0.005	0.002	<0.01	<0.005	<0.05
Rio Paguate Ford Crossing	4/4/83	<0.005	<0.05	<0.001	<0.005	<0.01	<0.0005	<0.005	0.013	0.029	0.023	<0.01	0.009	<0.05
Paguate Reservoir	4/4/83	<0.005	<0.05	<0.001	<0.005	<0.01	<0.0005	<0.005	0.014	0.18	0.012	<0.01	0.013	<0.05
Jackpile #4	4/4/83	<0.005	<0.05	<0.001	<0.005	<0.01	<0.0005	<0.005	0.007	0.067	0.027	<0.01	<0.005	<0.05
Jackpile New Shop	4/4/83	<0.005	<0.05	<0.001	<0.005	<0.01	<0.0005	<0.005	0.010	0.065	0.004	<0.01	<0.005	<0.05
Jackpile Old Shop	4/4/83	<0.005	<0.05	<0.001	<0.005	<0.01	<0.0005	<0.005	0.003	0.005	0.52	<0.01	0.011	<0.05

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ALBUQUERQUE, NEW MEXICO

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ANACONDA MINERALS COMPANY
NEW MEXICO OPERATIONS

FOR THE MONTH OF: May, 1983

DESCRIPTION	DATE	pH	TDS ppm	Cond umhos	HCO_3^- ppm	Cl^- ppm	$SO_4^=$ ppm	Na^+ ppm	K^+ ppm	Ca^{++} ppm	Mg^{++} ppm	NO_3^- ppm	F^- ppm	SiO_2 ppm	Mn^{++} ppm
Rio Paguate Upstream	5/3/83	8.12	560	490	246	8.4	165	31.3	4.6	76	27.8	0.36	0.35	42.6	0.075
Rio Moquino Upstream	5/2/83	8.66	915	800	256	7.9	412	82	4.9	104	47.4	0.60	0.41	28.4	0.047
Rio Paguate Above the Confluence	5/3/83	8.38	573	650	222	9.1	198	32.5	4.9	75	31	0.26	0.37	39.3	0.026
Rio Moquino Above the Confluence	5/3/83	8.21	1375	1490	298	11.5	708	130	6.4	146	74	0.70	0.50	23.8	0.038
Rio Paguate Ford Crossing	5/2/83	8.25	875	730	254	8.9	379	77	4.9	102	48.6	0.33	0.41	30.2	0.035
Paguate Reservoir	5/2/83	7.50	630	550	190	7.1	263	57	5.0	74	32.5	0.33	0.40	21.4	0.036
Jackpile #4	5/2/83	8.96	787	750	393	8.9	148	232	0.9	2.6	0.3	0.45	0.98	12.2	0.008
Jackpile New Shop	5/2/83	8.81	1551	1600	407	28.6	625	473	2.5	11.5	1.7	0.73	1.00	13.5	0.030
Jackpile Old Shop	NS														

	DATE	As ppm	Ba ppm	Cd ppm	Cr ppm	Pb ppm	Hg ppm	Se ppm	Cu ppm	Fe ppm	Zn ppm	Mo ppm	Ni ppm	V ppm
Rio Paguate Upstream	5/3/83	<0.005	0.05	<0.001	<0.005	<0.01	<0.0005	<0.005	0.004	0.021	0.006	<0.01	<0.005	<0.05
Rio Moquino Upstream	5/2/83	<0.005	<0.05	<0.001	<0.005	<0.01	<0.0005	<0.005	0.006	0.025	0.002	<0.01	<0.005	<0.05
Rio Paguate Above the Confluence	5/3/83	<0.005	<0.05	<0.001	<0.005	<0.01	<0.0005	<0.005	0.009	0.036	0.003	<0.01	<0.005	<0.05
Rio Moquino Above the Confluence	5/3/83	<0.005	<0.05	<0.001	<0.005	<0.01	<0.0005	<0.005	0.006	0.022	0.001	<0.01	<0.005	<0.05
Rio Paguate Ford Crossing	5/2/83	<0.005	0.08	<0.001	<0.005	<0.01	<0.0005	<0.005	0.005	0.011	0.004	<0.01	<0.005	<0.05
Paguate Reservoir	5/2/83	<0.005	<0.05	<0.001	<0.005	<0.01	<0.0005	<0.005	0.009	0.024	0.006	<0.01	<0.005	<0.05
Jackpile #4	5/2/83	<0.005	<0.05	<0.001	<0.005	<0.01	<0.0005	<0.005	0.005	0.051	0.007	<0.01	<0.005	<0.05
Jackpile New Shop	5/2/83	<0.005	<0.05	<0.001	<0.005	<0.01	<0.0005	<0.005	0.033	0.008	0.008	<0.001	<0.005	<0.05

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ANACONDA MINERALS COMPANY
NEW MEXICO OPERATIONS

FOR THE MONTH OF: June, 1983

DESCRIPTION	DATE	pH	TDS ppm	Cond umhos	HCO_3^- ppm	Cl^- ppm	$SO_4^=$ ppm	Na^+ ppm	K^+ ppm	Ca^{++} ppm	Mg^{++} ppm	NO_3^- ppm	F^- ppm	SiO_2 ppm	Mn^{++} ppm
Rio Paguate Upstream	6/1/83	8.25	838	1000	337	13.0	272	43.9	5.3	115	50	1.1	0.40	34.7	0.047
Rio Moquino Upstream	6/1/83	8.26	1551	1520	310	14.7	807	153	7.0	152	105	1.3	0.53	12.9	0.005
Rio Paguate Above the Confluence	6/8/83	7.40	863	900	316	13.5	313	55	5.9	98	59	1.6	0.44	30.2	0.028
Rio Moquino Above the Confluence	6/8/83	7.90	1923	1950	341	17.0	1052	198	8.5	165	139	1.6	0.67	11.6	0.022
Rio Paguate Ford Crossing	6/1/83	8.32	1666	1720	381	17.6	836	159	7.0	142	121	1.4	0.59	19.2	0.012
Paguate Reservoir	6/1/83	7.37	1100	1100	226	15.0	555	117	7.1	97	76	1.1	0.45	7.3	0.16
Jackpile #4	6/1/83	8.37	755	750	371	27.8	132	215	0.9	4.4	0.6	2.2	0.93	7.8	0.021
Jackpile New Shop	6/1/83	8.50	1525	1650	383	29.0	647	450	2.4	8.5	1.6	2.2	1.10	8.8	0.018
Jackpile Old Shop	NS														

	DATE	As ppm	Ba ppm	Cd ppm	Cr ppm	Pb ppm	Hg ppm	Se ppm	Cu ppm	Fe ppm	Zn ppm	Mo ppm	Ni ppm	V ppm
Rio Paguate Upstream	6/1/83	<0.005	<0.05	<0.001	<0.005	<0.01	<0.0005	<0.005	0.011	0.013	0.009	<0.01	<0.005	<0.05
Rio Moquino Upstream	6/1/83	<0.005	<0.05	<0.001	<0.005	<0.01	<0.0005	<0.005	0.006	0.012	0.003	<0.01	<0.005	<0.05
Rio Paguate Above the Confluence	6/8/83	<0.005	<0.05	<0.001	<0.005	<0.01	<0.0005	<0.005	0.009	0.022	0.007	<0.01	<0.005	<0.05
Rio Moquino Above the Confluence	6/8/83	<0.005	0.05	<0.001	<0.005	<0.01	<0.0005	<0.005	0.010	0.013	0.007	<0.01	<0.005	<0.05
Rio Paguate Ford Crossing	6/1/83	<0.005	<0.05	<0.001	<0.005	<0.01	<0.0005	<0.005	0.005	0.020	0.003	<0.01	<0.005	<0.05
Paguate Reservoir	6/1/83	<0.005	0.06	<0.001	<0.005	<0.01	<0.0005	<0.005	0.007	0.061	0.006	<0.01	<0.005	<0.05
Jackpile #4	6/1/83	<0.005	<0.05	<0.001	<0.005	<0.01	<0.0005	<0.005	0.010	0.022	0.073	<0.01	<0.005	<0.05
Jackpile New Shop	6/1/83	<0.005	<0.05	<0.001	<0.005	<0.01	<0.0005	<0.005	0.004	0.014	0.002	<0.01	<0.005	<0.05
Jackpile Old Shop	NS													

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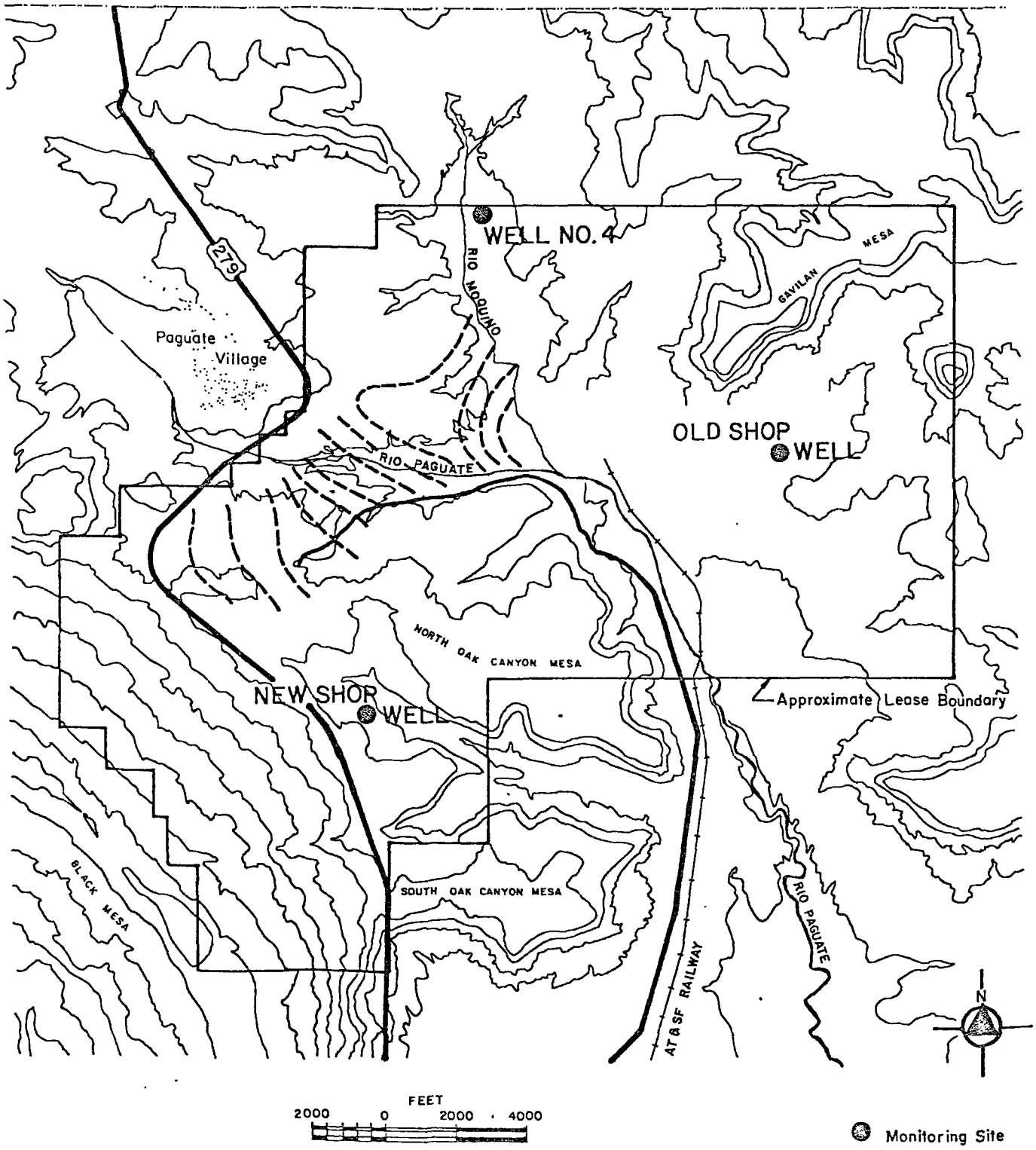
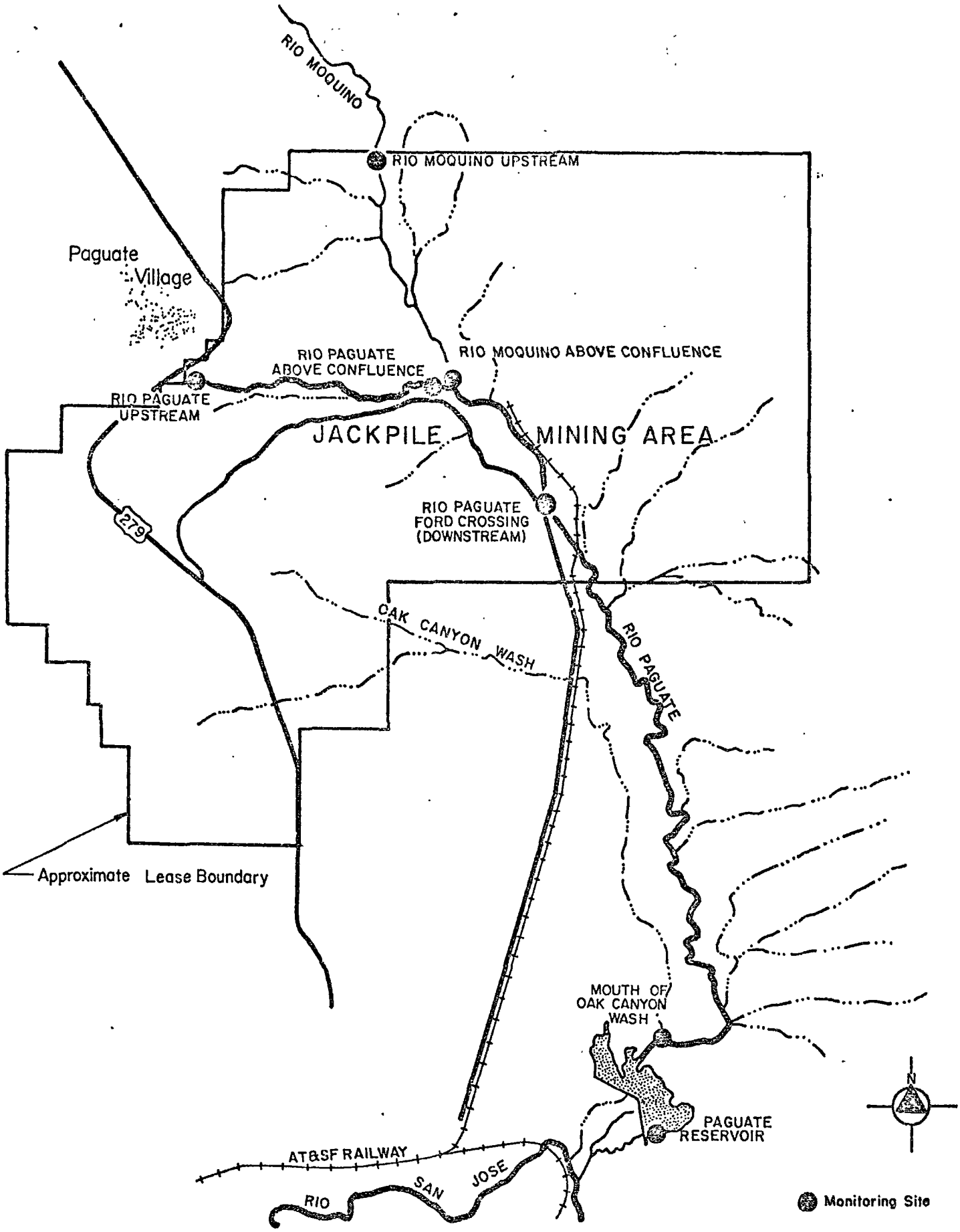
LOCATION OF GROUND WATER MONITORING STATIONS





LOCATION OF
SURFACE WATER MONITORING STATIONS

JACKPILE - AIR SAMPLING SURVEY

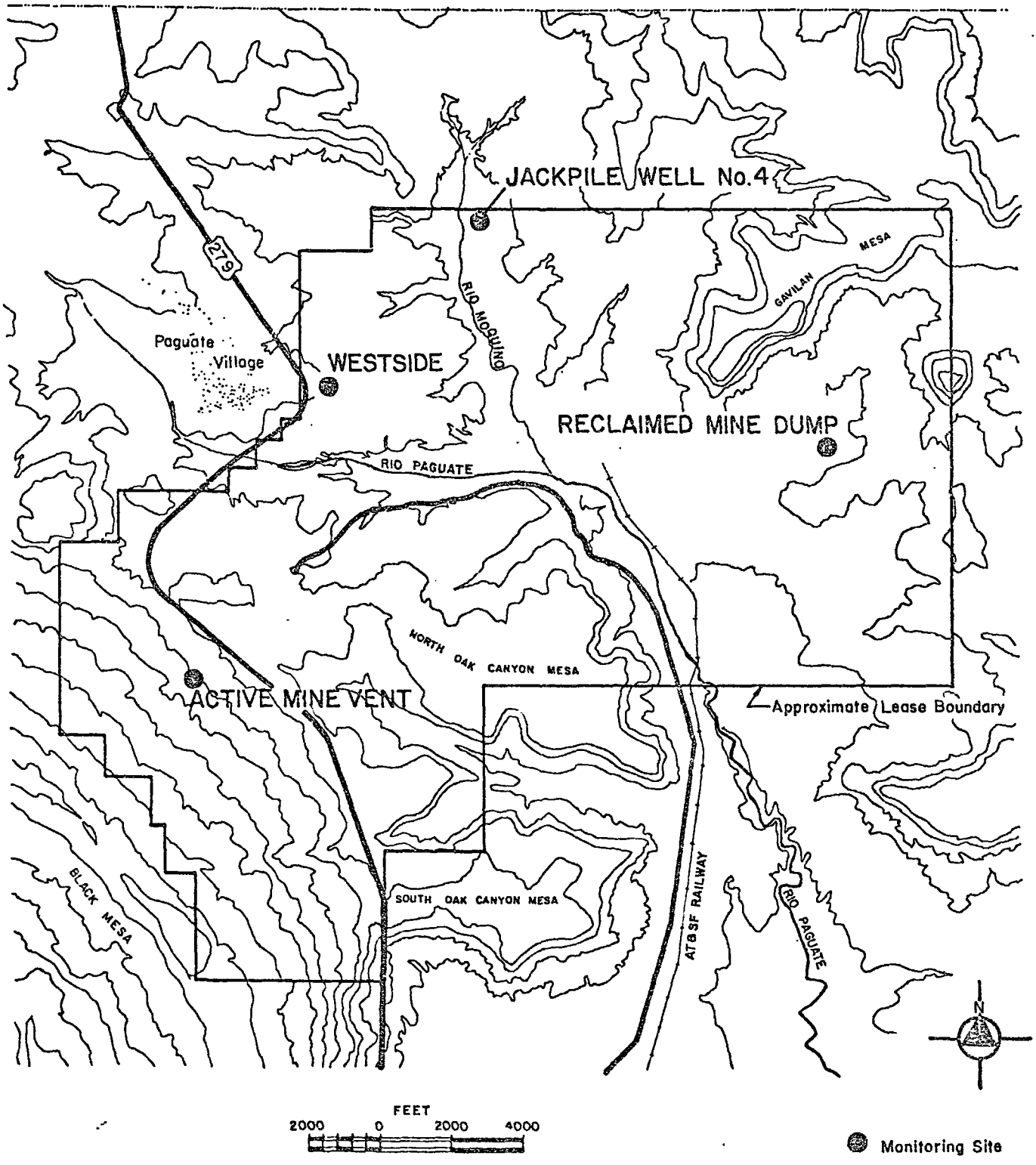
SECOND QUARTER, 1983

LOCATION	DATE	TOTAL PARTICULATE µgm/M^3	U-Nat. µCi/mlx10-15	Ra-226 µCi/mlx10-15	Th-230 µCi/mlx10-15	Pb-210 µCi/mlx10-15
1. Dump F	4/83	8.54	0.71	0.12	1.41	13.33
	5/83	21.33	2.83	0.54	1.02	14.37
	6/83	21.44	0.99	0.55	0.27	*
2. Mine Vent	4/83	9.61	0.48	0.14	1.39	19.22
	5/83	19.22	0.66	0.51	0.91	22.51
	6/83	20.19	1.59	0.51	0.86	*
3. West Gate	4/83	14.10	0.39	0.13	1.05	19.36
	5/83	17.58	0.72	0.34	1.00	14.99
	6/83	23.05	1.13	0.31	1.73	*
4. Well #4	4/83	5.92	0.67	0.15	0.97	11.84
	5/83	18.36	0.69	0.49	1.17	13.40
	6/83	22.48	1.35	0.49	0.54	*

* - Indicates that Pb-210 analysis are not complete. Results will be forwarded upon completion.

JACKPILE-AMBIENT RADON SURVEY

SECOND QUARTER, 1983

LOCATION	DATE	Rn-222 pCi/L
1. Dump F	4/83	2.51
	5/83	2.91
	6/83	2.90
2. Mine Vent	4/83	1.99
	5/83	2.26
	6/83	1.95
3. Well #4	4/83	1.16
	5/83	1.41
	6/83	1.54
4. Westgate	4/83	1.05
	5/83	0.71
	6/83	1.44

LOCATION OF AIR QUALITY MONITORING STATIONS